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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/729,768 | 12/06/2000 | Keun Ok Lim | HI-029 | 7722 |

34610 7590 05/15/2006

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| EXAMINER |
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OPSASNICK, MICHAEL N

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| ART UNIT | PAPER NUMBER |
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2626

DATE MAILED: 05/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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|------------------------------|---|-------------------------------------|--|
| Office Action Summary | Application No. 09/729,768 | Applicant(s) LIM, KEUN OK | |
| | Examiner Michael N. Opsasnick | Art Unit 2626 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,7-16 and 18-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,7-16 and 18-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5,7-16,18-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ittycheriah et al (5452397) in view of Netsch et al (5167004) in further view of Morgan et al (6937984).

As per claims 1,3,7,11, 12 and 24, Ittycheriah et al (5452397) teaches a method for increasing voice recognition rate in a voice recognition system comprising the steps of establishing a reference model for user voices subjected to recognition (as enrolling phrase of the user – fig. 6);

“receiving the user voices for voice recognition commands” as speaker recognized voice command (Fig. 6, col. 3 lines 10-20, col. 5 lines 9-10\, col. 8 lines 45-51);

“detecting the range and characteristics of the received voice data” as detecting the energy base of the input voice data and determining acoustic vectors (Fig. 2)

“comparing the range.....largest similarity” as comparing the characteristics of the utterance with the stored model (col. 4 lines 52-68)

“comparing the similarity of the retrieved word.....similarity reference.....report a voice recognition failure.....report a voice recognition success.....reference value” searching for the best word based on the models loaded, returning the best model and a score, determining if it is a match or not (Fig. 3; fig. 6, col. 6 lines 40-67)

“modifying the characteristics.....recognition” as updating the model database for accepted phrases (col. 6 line 1-26)

Ittycheriah et al (5452397) does not explicitly teach updating the model after a successful recognition, however, Netsch et al (5167004) teaches updating the model after a successful recognition (col. 4 lines 64-69). Therefore, it would have been obvious to one of ordinary skill in the art of recognition to modify the teachings of Ittycheriah et al (5452397) with updating the models after a successful recognition because the new result would advantageously improve the accuracy of the recognition process (Netsch et al (5167004), col. 1 line 67 – col. 2 line 5).

The combination of Ittycheriah et al (5452397) in view of Netsch et al (5167004) teaches the use of the speech recognition device for speech commands (in particular, Ittycheriah et al (5452397), col. 3 lines 28-34), but the combination is silent as to eventual command performance. However, Morgan et al (6937984) teaches notifying the user of the recognized command, and executing the command (Morgan et al (6937984), col. 2 lines 50-58). Therefore, it would have been obvious to one of ordinary skill in the

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art of speech command systems to modify the combination of Ittycheriah et al (5452397) in view of Netsch et al (5167004) with a recognition result and execution of a recognized command because it would advantageously provide the user with command recognition feedback while in a 'hand-free' environment (Morgan et al (6937984), col. 2 lines 30-45).

As per claims 2,4,5,8,9,25, the combination of Ittycheriah et al (5452397) in view of Netsch et al (5167004) in further view of Morgan et al (6937984) teaches extracting features for use in a HMM (Ittycheriah et al (5452397), col. 3 line 50-65).

As per claims 6,7,10-14,17,26,27, the combination of Ittycheriah et al (5452397) in view of Netsch et al (5167004) in further view of Morgan et al (6937984) teaches the claim limitations pertaining to comparing the models to reference models, selecting the best match based on a comparison, and negatively or positively confirming a match (Ittycheriah et al (5452397), col. 6, lines 1-26; examiner notes that Ittycheriah et al (5452397) teaches replacement of the old phrase with the newly accepted phrase, and therefore, the voice model characteristics have change because the new model contains the accepted new version of the phrase and therefore the model characteristics, including the vectors, are changed)).

As per claims 15, 16, the combination of Ittycheriah et al (5452397) in view of Netsch et al (5167004) in further view of Morgan et al (6937984) teaches phrase matching (Ittycheriah et al (5452397), col. 5 line 50 – col. 6 line 9).

As per claims 18-23, the combination of Ittycheriah et al (5452397) in view of Netsch et al (5167004) in further view of Morgan et al (6937984) teaches command performance prior to modification (as performing the command if there is no problem with the input speech (Ittycheriah et al (5452397), col. 3 lines 30-35), wherein the command can be a word (Ittycheriah et al (5452397), col. 6 lines 38-41).

Response to Arguments

3. Applicant's arguments filed 10/12/2004 have been fully considered but they are not persuasive. As per applicant's arguments on page 2 of the response, examiner respectfully disagrees and notes that the combination of Ittycheriah et al (5452397) in view of Netsch et al (5167004) in further view of Morgan et al (6937984) teaches command performance (as detailed by Morgan) when a recognition result occurs (Morgan; and Ittycheriah – col. 3 lines 24-35). With respect to the argument on page 3 of the response, in particular arguments towards improper modification, improper hindsight, and updating vocabulary lists while performing the display of commands, the examiner notes that Morgan is performing a command upon successful conclusion of the update process in Ittycheriah and the motivation to combine the references is derived from the Morgan reference, and therefore is not impermissible hindsight; and that the claimed modification is performed in connection with successful voice recognition and not in connection with the executed command.

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On page 4 of the response, first paragraph, applicant's allegations against the Ittycheriah reference fails to detail the differences, if any, of Ittycheriah and the claim language and is also performing piecemeal analysis of the prior art rejection (Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).).

On page 5 of the response, examiner respectfully disagrees with applicant's analysis of the Ittycheriah reference and the analysis of the combination of Ittycheriah and Morgan reference. Examiner notes command aspect of Morgan is combined with the part of Ittycheriah that perform the word recognition process (Ittycheriah, col. 5 lines 1-50) after the enrollment process, wherein the system is used for recognition. That is, the combination of Ittycheriah in view of Netsch in view of Morgan teaches the command performance in two, if not three, different fashions – I) wherein there is phrase similarity, requiring the person to change the phrase, command enrollment, and command recognition/performance begins; II) wherein there is phrase similarity, skipping ahead to already enrolled commands, and performing command recognition, or III) wherein there is phrase similarity, performing a false match and correct match score, notifying the user, and command recognition/performance begins.

Argument on the bottom of page 6 to the conclusion of the response mirror arguments presented earlier in the response, and are rebutted similarly to the arguments presented above.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Opsasnick, telephone number (571)272-7623, who is available Tuesday-Thursday, 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Richemond Dorvil, can be reached at (571)272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mno
5/11/06


Michael N. Opsasnick
Examiner
Art Unit 2626